

Welcome to Marsh Madness in the ACE Basin!

Here is everything you need to know about the competition; including the rules, links to the brackets and scoring rubrics, and information about all the animals that are competing!

This competition is meant to be educational and fun! Many of these match ups are very unlikely to ever happen in the wild. This is a way for you to learn about the animals that live in, visit, and utilize the ACE Basin and discover their unique adaptations.

The ACE Basin National Estuarine Research Reserve is one of the largest undeveloped estuaries on the east coast and is managed by SCDNR. The Ashepoo, Combahee, and Edisto rivers come together to form nearly 100,000 acres of protected land and salt marsh that so many different species call home.

Brackets are due the first Friday in February.

Battle winners will be announced every Monday for the next 8 weeks. The championship and winners will be announced the last week of March!

How to Play Marsh Madness

Marsh Madness is a fun and interactive way for students to learn about South Carolina's marsh and estuarine animals! The battle stories are meant to be fun and entertaining! We realize that some of these animals would never come in contact with each other in the wild, but we ask students to choose which animal is most likely to survive in their own habitat based on their adaptations and defense mechanisms. We hope students will use their creativity and critical thinking skills to analyze these match-ups!

Thirty-three animals have been selected to compete in the 8 week tournament. Students will research the animals in each match up and score them based on diet, agility, defense mechanisms, and superpower. They will then select which animal advances to the next round. Learn about each animal by viewing their information page and feel free to have students do additional research if needed! We've created a scoring worksheet to help students decide who will win each battle.

Compete

This is a friendly competition between classes! Each class or team will submit one completed bracket **by the first Friday in February** in order to participate in the Marsh Madness tournament. If you teach more than one class, you can submit one bracket per class. Just be sure to name your team appropriately. You can choose how you want your class to participate. You can assign students to research the animals and help the class choose a winner. Students can fill out their own individual brackets or work in teams.



Battle Rules

A couple things to note about the battles:

1. Battles are battles to survive, not always battles against each other. Animals may battle over resources or space or other factors in their habitats. If there is a battle over an item (such as food or nesting space) the animal that succeeds in securing the food or nesting space is the victor. The animal that retreats empty handed does not advance.
2. Winners are determined based on four categories: Diet, Agility, Defense Mechanisms, and Superpowers. (*Injuries and upsets can also affect battle outcomes.*)

How to complete your Marsh Madness Bracket

We recommend filling out the bracket on paper before filling out this Google Form to make it easier. Fill out the google form [here](#).

Or scan and email completed brackets to MarineEducation@dnr.sc.gov by the first Friday in February.

Scoring Sheet

Students can use the scoring rubric to rate the battling animals and decide on a winner. Animals are ranked based on diet, agility, defense mechanisms, and super powers. Remember, high scoring animals are most likely to advance. However, injuries, accidents, and upsets may cause high scoring animals to lose a battle.

Marsh Madness!

Name: _____

School: _____ Grade: _____



Champion
Week 8
12 points

Championship
Week 7
10 points

Final Four
Week 5
8 points

Final Four
Week 6
8 points

Elite 8
Week 4
5 points

Sweet 16
Week 2
2 points

Elite 8
Week 3
5 points

Sweet 16
Week 1
2 points

Wild Card
1 point

Group 3

Tough Talent

Group 4

Resilient and Brilliant

Group 1

**Where Did You Come From,
Where Did You Go?**
(non-native or migratory)

Group 2

Camouflaged Critters

Wild Card Winner

White Shrimp

Green Sea Turtle

River Otter

Florida Manatee

Cownose Ray

Red Swamp Crayfish

Red Knot

Striped Burrfish

Southern Flounder

Common Octopus

Atlantic Brief Squid

Mud Fiddler Crab

Common Sea Star

Brown Pelican

Horseshoe Crab

Diamondback Terrapin

Blue Crab

Eastern Oyster

Cobia

Carolina Hammerhead

Knobbed Whelk

American Alligator

Osprey

American Oystercatcher

Bottlenose Dolphin

Red Drum

Atlantic Sturgeon

Spotted Seatrout

Bald Eagle

Wood Stork

Stone Crab



Name: _____

School: _____

Grade: _____

Rules

- The entire bracket should be filed out and submitted before the first battles start
- Do as much research as you like to pick your winning animals, and don't change your answers once the first battle starts!
- Winners are determined based on 4 categories:
 - Diet
 - Agility
 - Attack mechanisms
 - Defense adaptationsInjuries and upsets can also affect battle outcomes.
- Choose which animal is most likely to survive in their own habitat based on their adaptations and defense mechanisms.
- All animals participating are single adults.
- If an animal is injured during a battle, they may temporarily be incapacitated and will carry on through the rest of the tournament.
- If an animal retreats without food, they lose that battle.
- Battles are released on Mondays.

Dates

February 3, 2023: Brackets Due

February 6, 2023: Week 1 winners,
Wild Card winner

February 13, 2023: Week 2 winners

February 20, 2023: Week 3 winners

February 27, 2023: Week 4 winners

March 6, 2023: Week 5 winners

March 13, 2023: Week 6 winners

March 20, 2023: Week 7 winners

March 27, 2023: Week 8 winners
announced CHAMPIONSHIP

Enter Your Points

Wild Card

1 point

Week 1

2 points each

Week 2

2 points each

Week 3

5 points each

Week 4

5 points each

Week 5

8 points each

Week 6

8 points each

Week 7

10 points each

Week 8

12 points

TOTAL

137 points possible



Marsh Madness Scoring Rubric

Animal: _____

Total Score: _____

Criteria	Score (1-10)
Diet	
Agility	
Defense Mechanisms	
Super Power	
Total Score	

Diet

1- Can only eat what is nearby, limited ability to search for food

5- Must search for food but will usually find something

10- Diverse diet, can easily find food

Defense Mechanisms

1- No noticeable defensive abilities

5- Common defense mechanisms, none extremely specialized

10- Defensive behavior unique to the animal

Agility

1- Slow moving or clumsy

5- Not a diverse range of abilities

10- Incredibly nimble, unmatched in speed, and dexterity

Super Power

1- Super power is not helpful for survival

5- Super power helps them survive daily life but not fight or defend

10- Impressive ability to survive in a battle using a special adaptation



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Agility	
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Meet the Contenders!

The following slides will introduce
the competing species for this
year's Marsh Madness competition

Wild Card



Credit: NOAA

[Red Lionfish](#)



Credit: NOAA

[Gag Grouper](#)

Red Lionfish

(*Pterois volitans*)

(Invasive)



THE PERFECT INVADER

Diet

- Eat 10x their body weight in small fish and invertebrates every day
- Easily wipe out populations of other reef fish, such as native snapper and grouper, by swallowing them all whole

Agility

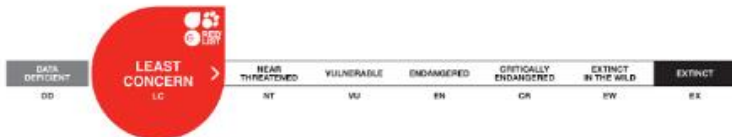
- They live in coral and rocky reefs, usually hiding in crevices and caves
- Slow and stealthy

Defense Mechanisms

- Venomous spines on their dorsal fins
- Very aggressive

Superpower

- Invasive species from Indo-Pacific
- Able to take over an ecosystem causing them to be really hard to remove



Gag Grouper

(*Mycteroperca microlepis*)



SUSTAINABLE SENSATION

Diet

- Fish, crabs, shrimp, squid

Agility

- Move through the water slowly, but can be powerful
- Body is very muscular and streamlined for quick bursts of speed

Defense Mechanism

- Ability to change the color of the bright markings on their body to blend in with their surroundings

Superpower

- Born female but can change to male once they mature



Where Did You Come From? Where Did You Go?

(invasive and/or migratory)



White Shrimp



Red Swamp Crayfish



Red Knot



Florida Manatee



Green Sea Turtle



Cownose ray



North American River Otter

White Shrimp

(*Litopenaeus setiferus*)



SKIP, STAB, POP!

Diet

- Feed on plankton and other small microorganism that cannot be seen with the naked eye

Agility

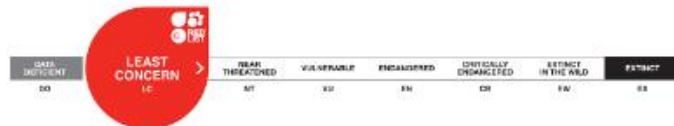
- They have large crawling legs used to crawl on rocks and floating objects
- They have smaller swimming legs used to swim throughout the water column

Defensive mechanisms

- When threatened they will propel themselves backwards very rapidly to avoid predators
- They have a rostrum at the top of their head in between their eyes that acts as a spear to stab predator

Superpower

- They have the longest antennae can average 2-3 times more than their body size . They are used for sensing food.



Red Swamp Crayfish

(*Procambarus clarkii*)

(Invasive)



STAY OUT OF MY SWAMP

Diet

- Eats almost anything they can get their claws on
- Eats plants, snails, fish, and amphibians

Agility

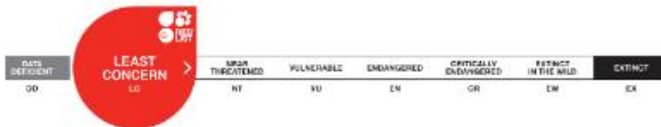
- Small and slow compared to fish
- Can travel via waterways for several miles at night by walking along the mud

Defense Mechanisms

- Have large claws
- Can dig deep burrows on the banks of lakes and rivers

Superpower

- Well adapted to areas with large water level fluctuations
- Resilient and can easily take over an area causing a decline in native crayfish populations



Red Knot

(*Calidris canutus*)



KNOT YOUR AVERAGE BIRD

Diet

- Their favorite and hearty meal are horseshoe crabs eggs found on the beach during horseshoe spawning

Agility

- Can walk very fast on the sand
- Are able to fly 18,000 miles a year from the Arctic to South America

Defense Mechanisms

- Stay in flocks up as large as 8,000
- Can fly away quickly

Superpower

- Can fly up to 9 days straight without eating and sleeping



Florida Manatee

(*Trichechus manatus latirostris*)



SWEET SEA POTATO

Diet

- Aquatic plants like sea grass and seaweed growing on the floor of the estuary

Agility

- Large and slow
- Their strong tail helps them push through the water
- They travel long distances every year up the east coast during the summer and back to Florida and the Gulf coast in the winter

Defense Mechanisms

- Few defenses
- Slow and bulky, often hit by passing boats
- Hold their breath for ~ 20 minutes if they need to dive underwater for protection or feeding

Superpower

- Use sensory hairs scattered across their body to engage in tactile contact
- Communicate by sound using underwater chirps, squeaks and grunts



Green Sea Turtle

(*Chenlonia mydas*)



THE VEGETARIAN

Diet

- Algae and seagrasses make up this reptile's veggie diet

Agility

- They are slow on land but very quick swimmers in the water

Defense Mechanisms

- Their shell is a natural suit of armor that protect them from predators

Superpower

- They are able to hold their breathe up to five hours
- They are the largest of all hard-shelled sea turtles



American Cownose Ray

(*Rhinoptera bonasus*)



MOOve, FEVER COMING THROUGH

Diet

- Clams, sea snails and crustaceans

Agility

- Uses pectoral fins to swim quickly and efficiently through water columns

Defense Mechanisms

- Has venomous barb at end of tail used to stab predators when threatened

Superpower

- Constantly swimming
- They swim in large groups called "fevers".
- Fevers can have as many as 1,000 cownose rays!
- Can swim in shallow water that is only inches deep or swim in the open ocean at depths of 75ft!



North American River Otter

(*Lontra canadensis*)



RIVER ROYALTY

Diet

- Diverse diet since they are found in many different habitats throughout our state
- Eats fish, but also a wide variety of crustaceans, bivalves, small mammals and reptiles, and even birds

Agility

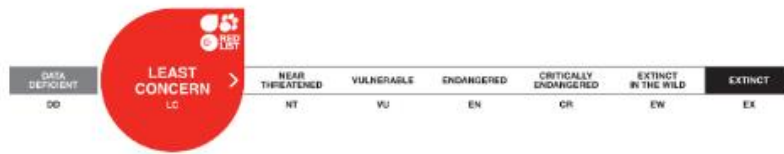
- Very proficient swimmers and can glide through the water making sharp turns to catch fish
- Speed on land can get up to ~15 mph and they can swim even faster

Defense Mechanisms

- Very sharp teeth that can be used to crack open things like clam shells
- Communicate using various sounds to warn each other about predators

Superpower

- Have ~156,000 hairs per square inch on their body which means they can handle colder water temperatures
- Can hold their breath for ~4 minutes underwater



Camouflaged Critters



Striped Burrfish



Common Sea Star



Common Octopus



Southern Flounder



Atlantic Brief Squid



Horseshoe Crab



Brown Pelican



Mud Fiddler Crab

Striped Burrfish

(*Chilomycterus schoepfi*)



THE PINECONE OF THE ESTUARY

Diet

- Diverse diet, likes to eat fiddler crabs, shrimp, small fish, squid, mussels, and crustaceans

Agility

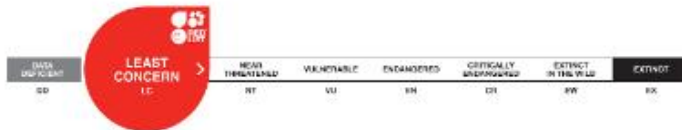
- Shaped like a box making it difficult to move through the water
- Clumsy and slow because of their small fins and awkward body shape

Defense Mechanisms

- Inflate their body to look larger and are covered in tough spikes
- Large black spots on their body that look like eyes to deter predators and have stripes to look like *Spartina* grass

Superpower

- Crush prey with their strong teeth plates



Common Sea Star

(*Asterias rubens*)



I'M NOT A FISH

Diet

- Snails, clams, oysters and mussels

Agility

- Uses their tube feet to move across different terrain

Defensive Mechanism

- Has spiny and rough skin

Superpower

- Can eject their gastrointestinal tract from their body to eat prey
- Can regenerate their lost arms



Common Octopus

(*Octopus vulgaris*)



THE CRAFTY CRITTER

Diet

- A variety of bivalves like clams, crustaceans, and fish

Agility

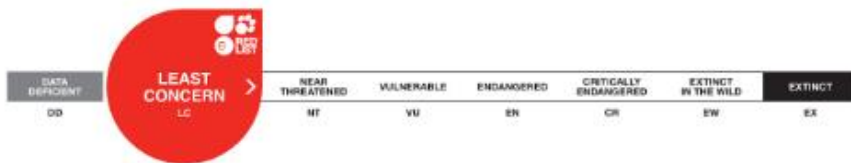
- Squeeze through small crevices and other small and difficult places to escape from predators and hide
- Can intake water and then shoot it out of their siphon (kind of like a tube) and it will propel them backwards through the water

Defense Mechanisms

- Can let out ink when alarmed to distract their predator
- Have a strong beak and can inject venom into their prey

Superpower

- Can hide in plain sight by changing the chromatophores on their body which helps them camouflage within seconds



Southern Flounder

(*Paralichthys lethostigma*)



Credit: David Fladd

THE FIN-TASTIC FLATFISH

Diet

- Small fishes such as mummichogs and anchovies, and shrimp and other invertebrates

Agility

- Quick bursts of movement
- Not a long distance swimmer since they mainly hang out at the bottom of the marsh or ocean

Defense Mechanisms

- Can change their color pattern to camouflage with their surroundings
- Bury themselves under the sand to hide

Superpower

- Within the first year of their life, one of their eyes migrates to the other side through metamorphosis so they are able to see what is above them while laying at the bottom of the ocean floor



Atlantic Brief Squid

(*Lolliguncula brevis*)



MYSTERY OF THE DEEP

Diet

- Small fish, fish larvae, bottom-dwelling crustaceans

Agility

- Able to propel themselves through the open water by ejecting jets of water through their siphon
- Travel in schools

Defense Mechanisms

- Can eject a cloud of ink to distract a predator and escape
- Camouflage quickly by changing their chromatophores

Superpower

- Can tolerate a wide range of salinity

Horseshoe Crab

(*Limulus polyphemus*)



10 EYES ARE THE NEW 4 EYES

Diet

- Bivalves, worms, small crustaceans, and decaying animal matter

Agility

- Bottom dwellers, use their legs to get around on the sand in and out of the water
- Only use their telson, or tail, to flip over when upside down, not as a weapon

Defense Mechanisms

- Have a hard outer shell
- Very easily camouflaged in the sand

Superpower

- Have 10 eyes, including compound eyes and light receptors
- Females lay about 4,000 eggs in a cluster that can add up to 100,000 eggs in one season



Brown Pelican

(*Pelecanus occidentalis*)



DIVING DIVAS

Diet

- A variety of fish

Agility

- Can't walk well on land but it is fast and graceful in the sky
- Can dive into the water from as high as 65 feet and swim using webbed feet

Defense Mechanisms

- Throw up on humans who get too close to their nesting site
- Hang out in large groups

Superpower

- Excellent eyesight for spotting fish under the water
- Can hold ~3-5 gallons of water in their pouches when they dive to catch a fish
- Able to drain out the water while keeping the fish inside the pouch which keeps other birds from stealing their fish



Mud Fiddler Crab

(Uca pugnax)



HEY DIDDLE DIDDLE

Diet

- Detritus, or decaying marsh plants, algae, bacteria

Agility

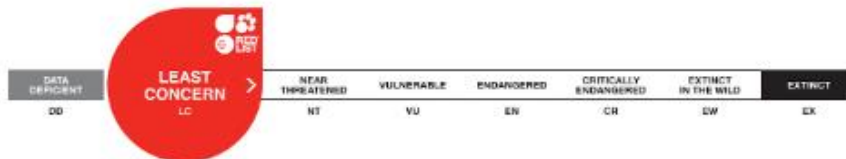
- Small but quick
- Scurry across the pluff mud and into their burrows when threatened

Defense Mechanisms

- Can use their big claw to defend themselves (only males)
- Can dig 3 feet long burrows in the pluff mud

Superpower

- Adept at regulating their metabolism over a wide range of temperatures



Tough Talent



[Diamondback Terrapin](#)



[Cobia](#)



[Carolina Hammerhead](#)



[American Alligator](#)



[Blue Crab](#)



[Knobbed Whelk](#)



[Eastern Oyster](#)



[Osprey](#)

Diamondback Terrapin

(*Malaclemys terrapin*)



SNOWFLAKES OF THE MARSH

Diet

- Living in the salt marsh they can eat anything from crustaceans, small fish, and mollusks including periwinkle snails

Agility

- Slow movers on land because of their heavy shell and short legs
- Move better in the water and can swim for short periods of time to find food
- Can hold their breath long enough to take a nap

Defense Mechanisms

- Excellent at camouflaging in the marsh with their tough green and black shells
- Can throw up to distract a predator as they quickly swim away

Superpower

- Only reptile in SC that lives its whole life in brackish water/salt marsh



Cobia

(*Rachycentron canadum*)



THE HULK OF THE SEA

Diet

- Bottom-dwelling animals such as blue crabs, shrimp, fish, rays, and sharks

Agility

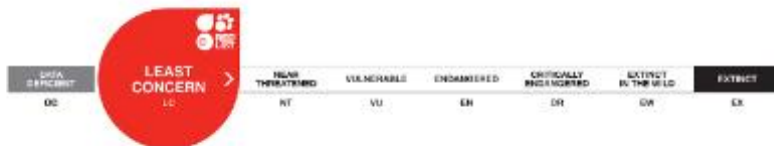
- Streamlined, fast swimmers with the ability to move quickly through the water

Defense Mechanisms

- Strong and aggressive predators
- Can get ~6 feet long and weigh up to ~100 pounds

Superpower

- Mistaken for other fish such as remoras or sharks which help predators stay away



Carolina Hammerhead

(*Sphyrna gilbert*)



NEW SHARK ON THE BLOCK

Diet

- A variety of fish and invertebrates, cephalopods, and smaller sharks and rays

Agility

- Have a strong caudal fin to help propel them through the water
- Can turn quickly to chase their prey
- Be anywhere from 9-13 feet in size

Defense Mechanism

- The placement of their eyes at the ends of the 'hammer' allow them to see 360 degrees around their body

Superpower

- Placentally viviparous: don't have eggs but give live birth like mammals



LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
LC	NT	VU	EN	CR	EW	EX

American Alligator

(*Alligator mississippiensis*)



THE ARMORED DINOSAUR

Diet

- A variety of fish, birds, mammals, and other reptiles

Agility

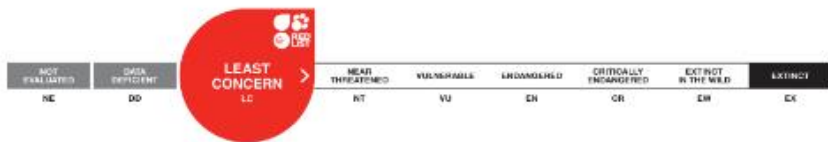
- Can only sprint very short distances on land but are very efficient underwater and can reach speeds of 20 mph
- Ambush predator

Defense Mechanisms

- Can stay underwater for 45-60 minutes
- Stay camouflaged in the water by just showing their eyes and having their nose exposed out of the water so they are able to breathe

Superpower

- Have ~80-100 teeth and never run out, if one wears down or falls out, a new one grows
- Exert ~3,000 lbs of pressure per square inch with its jaw when grabbing its prey



Blue Crab

(*Callinectes sapidus*)



CRABBY PATTY

Diet

- Bivalves, crustaceans, small fish, plant, and animal detritus

Agility

- Quick and agile
- Use their back swimming legs to push themselves quickly through the water and use their pointed walking legs to move side to side

Defense Mechanism

- Have a powerful pinch with their front claws

Superpower

- Swim away very fast
- Bury themselves in the sand very quickly



LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
LC	NT	VU	EN	CR	EW	EX

Knobbed Whelk

(*Busycon carica*)



WHELK, IT'S NOT A CONCH!

Diet

- Clams, mussels and other small bivalves

Agility

- Uses its foot to move across different substrates of the ocean floor. From rocks and reefs to sandy beaches.

Defense mechanisms

- They can hide in their shells using a hard plate that acts as a trap door.

Superpower

- Shell is designed to be able to break other mollusks and pry them apart.



LEAST CONCERN	NEARLY THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
LC	NT	VU	EN	CR	EW	EX

Eastern Oyster

(*Crassostrea virginica*)



CALL ME PEARL

Diet

- Filter feeders: eat phytoplankton and algae floating by in the water

Agility

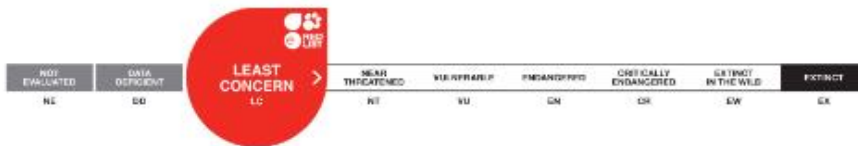
- Float through the water as young plankton and then settle to the floor and cannot move for the rest of their life

Defense Mechanisms

- Use their adductor muscles to shut their shells together very tightly
- Can be up to 10 pounds of pressure holding their shells together, making it almost impossible to open
- If stepped on they could puncture, scrape, or stab the skin of an animal

Superpower

- One oyster can filter ~50 gallons of water a day



Osprey

(*Pandion haliaetus*)



CALL OF THE WILD

Diet

- Eats a variety of fish

Agility

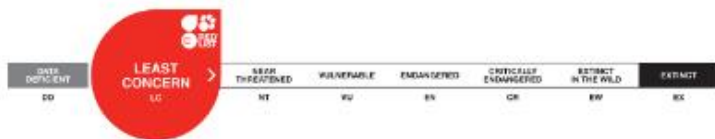
- Fast and powerful in the sky
- Fly at speeds of 30 mph

Defense Mechanism

- Have an incredibly sharp beak and talons for gripping and tearing prey

Superpower

- Can dive into the water feet first to catch prey, grabbing with its sharp talons from as high as 30-100 ft
- Have a reversible outer toe that allows them to grasp with two toes in front and two behind with barbed pads on the soles to hold onto slippery fish
- Use the same nest for years-both mates help build it



Resilient and Brilliant



Atlantic Sturgeon



Stone Crab



Credit: David Fladd

Red Drum



James D. Dredick
Florida Department of Natural Resources

American
Oystercatcher



Credit: NOAA

Bottlenose Dolphin



Credit: David Fladd

Spotted Seatrout



Wood Stork



Credit: NOAA

Bald Eagle

Atlantic Sturgeon

(*Acipenser oxyrinchus*)



Handling endangered species, such as the Atlantic Sturgeon, requires a permit and this work is conducted under ESA permit 20538-3.

THE MONSTER FOSSIL

Diet

- Bottom feeders, consuming crustaceans, worms, mollusks, and fish

Agility

- Large and slow swimming
- Can leap up to 9 feet in the air

Defense Mechanisms

- Body is covered in scutes or bony plates
- Thick leathery skin

Super Powers

- Can grow up to 16 feet long and weigh over 800 pounds allowing them to have few predators
- Anadromous, spawn in freshwater and live in saltwater when they reach adulthood
- Being able to spawn during multiple seasons is probably an advantage for maintaining populations



Stone Crab

(*Menippe mercenaria*)



Credit: Alex Maga

BONE CRUSHER

Diet

- Hard shelled clams, barnacles, scallops and sea snails

Agility

- All legs are pointed walking legs making stone crabs very quick crawlers

Defense Mechanism

- Extremely powerful claws that can break your finger!

Superpower

- Can camouflage themselves to look like a stone on the ocean floor.



LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
LC	NT	VU	EN	CR	EW	EX

Red Drum

(*Sciaenops ocellatus*)



SPORTY SPOT TAIL

Diet

- Have a diverse diet and likes to eat small fish like mullet, crabs, and shrimp

Agility

- Very strong swimmers because of their streamlined body and strong caudal fin
- Can turn quickly through the water to chase their prey

Defense Mechanism

- Make a drumming sound to scare away predators

Superpower

- Live a long time (up to 40 or 50 years)
- Can move around to different habitats during their lifetime



American Oystercatcher

(*Haematopus palliatus*)



SHELL CRACKER

Diet

- Oysters, other bivalves, small fish, marine worms

Agility

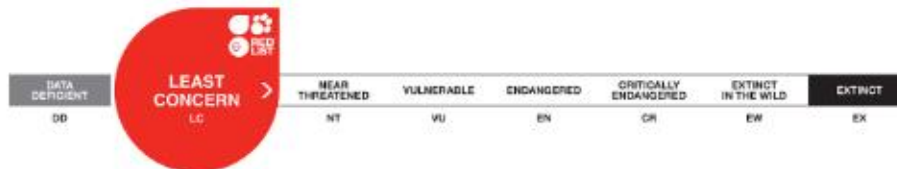
- Great at wedging their bill into oyster shells to eat the oyster
- Hang out in groups and have a very loud call to communicate with each other

Defense Mechanism

- Have a strong bill that can be used as a hammer

Superpower

- These birds have thick feet that can withstand walking on top of an oyster bed
- Parents take care of their chicks 30 days post fledging



Bottlenose Dolphin

(*Tursiops truncatus*)



BEAUTY AND BRAINS

Diet

- Variety of fish, including croaker and spot as well as squid

Agility

- Can move quickly through the water and jump out of the water
- Very clever, fast, and great hunters

Defense Mechanisms

- Can work as a team to fight off any predators
- Able to communicate with each other using various sounds underwater

Superpower

- Large brains that are considered one of the smartest animals in the ocean
- Use echolocation to sense their surroundings and find prey



Spotted Sea Trout

(*Cynoscion nebulosus*)



SNAGGLE TOOTH

Diet

- Eat crustaceans, shrimp, menhaden, spot, mullet, croaker, and mummichogs

Agility

- Fast ambush predators
- Can quickly grab prey with their large mouth and sharp front teeth

Defense Mechanism

- Can make drumming noises by beating against their swim bladder

Superpower

- Can swallow their prey whole



Wood Stork

(*Mycteria americana*)



STORKY DORKY

Diet

- Eat fish and other aquatic invertebrates

Agility

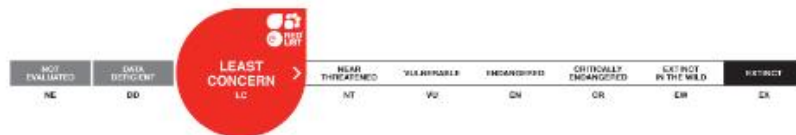
- Slowly walks through wetlands looking for food
- Soar through the sky like raptors

Defense Mechanisms

- Able to roost in trees above water
- Nest in tight colonies
- If threatened, they pull their neck in, fluff up feathers, and walk towards intruder

Superpower

- One of the largest wading birds in North America
- Fastest known reflex action as they are able to submerge their beaks into the water creating a trap for prey species



Bald Eagle

(*Haliaeetus leucocephalus*)



MR. STEAL YOUR FISH

Diet

- Many fish species, small mammals, birds and carrion

Agility

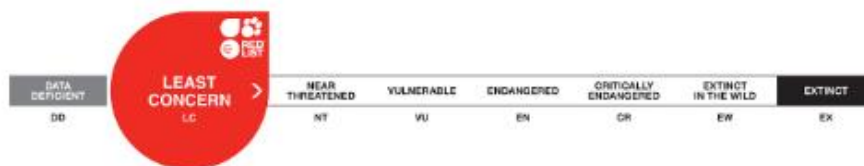
- Reach speeds of ~35-45 mph

Defense Mechanism

- Make a high pitched call to communicate to each other
- Can see ~4 times farther than a human, which helps them locate their prey

Superpower

- Their talons exert 400 to 1000 pounds of pressure per square inch
- Scavenge for food by harassing other birds for their meals and eat roadkill



An aerial photograph of a river delta, likely the Mississippi River Delta, showing a complex network of waterways and land. The text is overlaid on the image.

Check out the Scientist Spotlights!

Learn more about a few contenders
and the researchers to who study them.

Scientist Spotlight



Felicia Sanders

Wildlife Biologist
(Seabird Coordinator)

Red Knot

- A Red Knot's yearly round-trip migration is up to 18,000 miles.
- Knots nest on high Arctic tundra slopes.
- Some knots spend the winter at the southern tip of South America.
- Red Knots concentrate in large flocks at stopover points during migration and one of the most important sites in the spring is in South Carolina.
- They eat small clams and horseshoe crab eggs by probing their bill in beach sand and mud.

Scientist Spotlight

Atlantic Brief Squid



Jeff Good

Wildlife Biologist

(Shellfish Research Section)

- One of the only cephalopods that can survive in the rapidly changing salinities of an estuary/salt marsh, which makes it a primary food source for an array of commercially and ecologically important animals.
- It has some of the best eyes of the estuarine predators, being able to hunt in murky water using sight as its primary sense.
- You can tell the how old a brief squid is by counting the DAILY growth rings of its statolith (almost like year rings of a tree or fish otolith).

Scientist Spotlight

Horseshoe Crab



Daniel Sasson

Wildlife Biologist
(Crustacean Research)

- Horseshoe crabs are the only extant (living) species that use book gills to breathe!
- Research has shown that horseshoe crabs have been spawning in salt marshes as well as beaches.
- Horseshoe crabs have been found to be important part of the diet of Loggerhead and Kemp's Ridley sea turtles.
- Apart from rearing in captivity, there is no way to know for sure how old an adult horseshoe crab is. But you can roughly estimate age by the condition of the carapace.
- Horseshoe crabs are often called “living fossils” but this is a misnomer: they have never stopped evolving. But fossils looking fairly similar to living horseshoe crabs date back at least 450 million years.

Scientist Spotlight



Rachel Bonafilia

Wildlife Biologist

(Ecosystems Research Group in the
ACE Basin)

Wood Stork

- Adults drip water from their beaks onto nestlings to cool them down.
- Scientists band wood stork chicks to learn more about them. These bands go around their ankles to help track where they travel to. This is done with many bird species.
- Is the only stork found in North America!

Scientist Spotlight

Atlantic Sturgeon



Daniel Farrae

Wildlife Biologist

(Estuarine Finfish-Genetics)

- Atlantic sturgeon spawn during the spring and fall in certain rivers, mostly through the middle of their range. And everywhere that we have documented this and tested them via genetics the two groups are genetically distinct from one another!
- We are still trying to learn more about how/why the different spawning groups are distinct and how it occurred evolutionarily.